

REMARKS

The Official Action mailed February 10, 2006, has been received and its contents carefully noted. Filed concurrently herewith is a *Request for One Month Extension of Time*, which extends the shortened statutory period for response to June 10, 2006. Accordingly, the Applicant respectfully submits that this response is being timely filed.

The Applicant notes with appreciation the consideration of the Information Disclosure Statements filed on July 24, 2003; and August 11, 2003.

Claims 1-4 and 11-22 are pending in the present application, of which claims 1, 2, 11 and 12 are independent. Claims 2, 11 and 12 have been amended for clarity. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

Paragraph 3 of the Official Action rejects claim 12 under 35 U.S.C. § 112, second paragraph, asserting a lack of antecedent basis for "the projection." In response, claim 12 has been amended for clarity and "the projection" has been removed. Therefore, the rejection is now moot. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 112 are in order and respectfully requested.

Paragraphs 5, 7, 9 and 10 of the Official Action reject claims 1, 2, 11, 12 and 15-18 as anticipated by U.S. Patent Application Publication No. 2003/0092213 to Yamazaki.

In order to overcome these rejections, a verified English translation of priority application JP 11-231281 filed August 18, 1999, will be filed as soon as it is complete and received from Japan. Since Yamazaki publication is a publication of an application with an earliest effective U.S. filing date of May 12, 2000, which is later than the filing date of JP '281, the Applicant respectfully submits that the rejections under § 102(e) should be overcome. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 102(e) are in order and respectfully requested.

Paragraphs 6, 8 and 11 of the Official Action reject claims 1, 2, 12, 15, 16 and 18 as anticipated by U.S. Patent No. 5,728,259 to Suzawa. The Applicant respectfully

traverses the rejection because the Official Action has not established an anticipation rejection.

As stated in MPEP § 2131, to establish an anticipation rejection, each and every element as set forth in the claim must be described either expressly or inherently in a single prior art reference. Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Independent claims 1 and 2 recite an island-like semiconductor that covers and extends over a pair of edges of a projection of a base film. The Official Action asserts that Figure 5 of Suzawa teaches "a base film 502 having a projection ... and an island-like semiconductor layer 506 extending over a pair of edges of the projection" (page 3, Paper No. 20060205). The Applicant respectfully disagrees and traverses the above-referenced assertions in the Official Action.

In Figure 5 of Suzawa, the island-like semiconductor layer 506 (or 510/511 in Figure 5E) does not cover and extend a pair of edges of the projection of base film 502 (Figures 5A, 5C, 5D and 5E of Suzawa reproduced below).

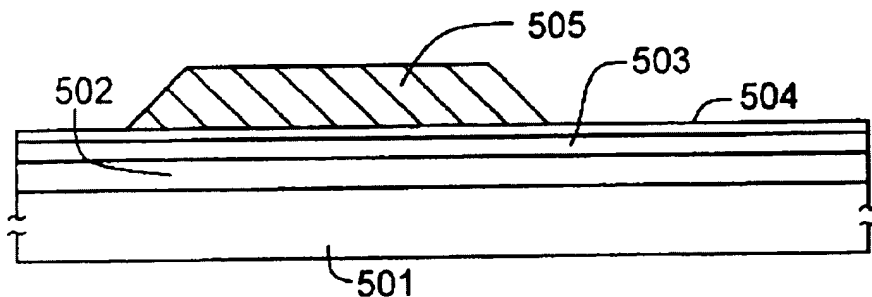


FIG. 5A

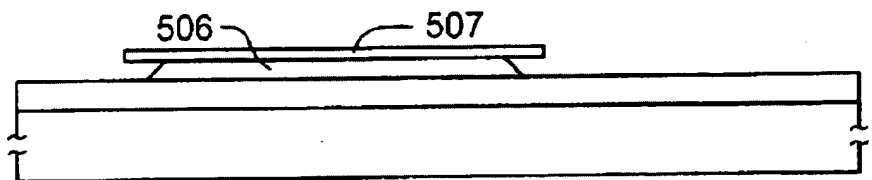


FIG. 5C

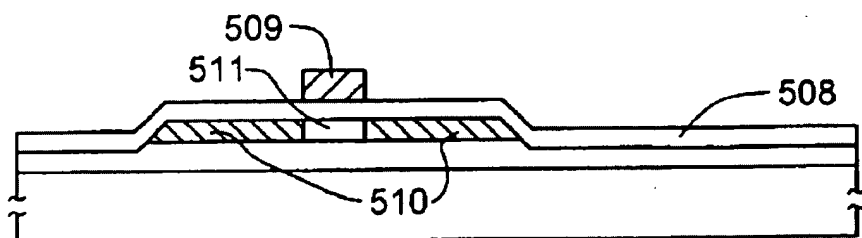


FIG. 5D

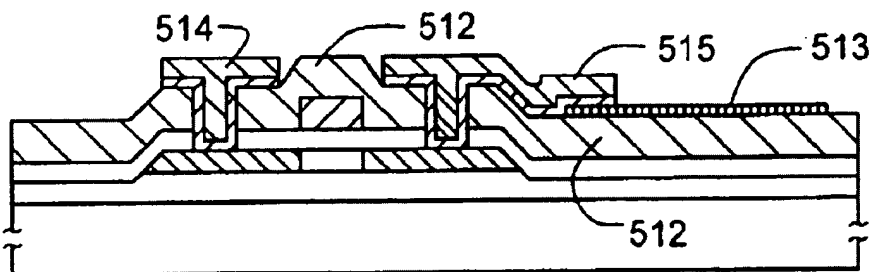


FIG. 5E

In other words, Figure 5 of Suzawa discloses a base film 502, an island-like semiconductor layer 506 over a region of a first thickness (mid-portion) of the base film. However, Suzawa does not teach an island-like semiconductor layer 506 over a region of a second thickness (peripheral portions) of the base film.

Independent claim 12 recites source and drain regions over a region of a second thickness of a base film which is smaller than a first thickness of the base film. However, In Figure 5E of Suzawa (reproduced above), source and drain regions 510 do not exist over a second thickness of a base film, which is smaller than a first thickness of a base film.

Therefore, Suzawa does not teach all the features of the present invention, either explicitly or inherently.

Since Suzawa does not teach all the elements of the independent claims, either explicitly or inherently, an anticipation rejection cannot be maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 102 are in order and respectfully requested.

Paragraph 13 of the Official Action rejects dependent claims 3, 4, 14, 19, 20 and 22 as obvious based on Suzawa. The Applicant respectfully traverses the rejection because the Official Action has not made a *prima facie* case of obviousness.

As stated in MPEP §§ 2142-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

With respect to dependent claims 3, 4, 14, 19, 20 (which depend from independent claims 1, 2 and 12), please incorporate the arguments above with respect to the deficiencies in Suzawa. Official Notice and arguments regarding "routine skill in the art" do not cure the deficiencies in Suzawa. The Official Action relies on Official Notice and arguments regarding "routine skill in the art" to allegedly teach the features of the dependent claims. However, Suzawa does not teach or suggest that an island-like semiconductor layer should cover and extend a pair of edges of a projection of a base film (claims 1 and 2); or that source and drain regions should be provided over a second thickness of a base film, which is smaller than a first thickness of a base film.

Since Suzawa does not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and

withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

Paragraph 14 of the Official Action rejects independent claim 11 and dependent claims 13, 17 and 21 as obvious based on the combination of Suzawa and U.S. Patent No. 5,965,916 to Chen. The Applicant respectfully traverses the rejection because the Official Action has not made a *prima facie* case of obviousness.

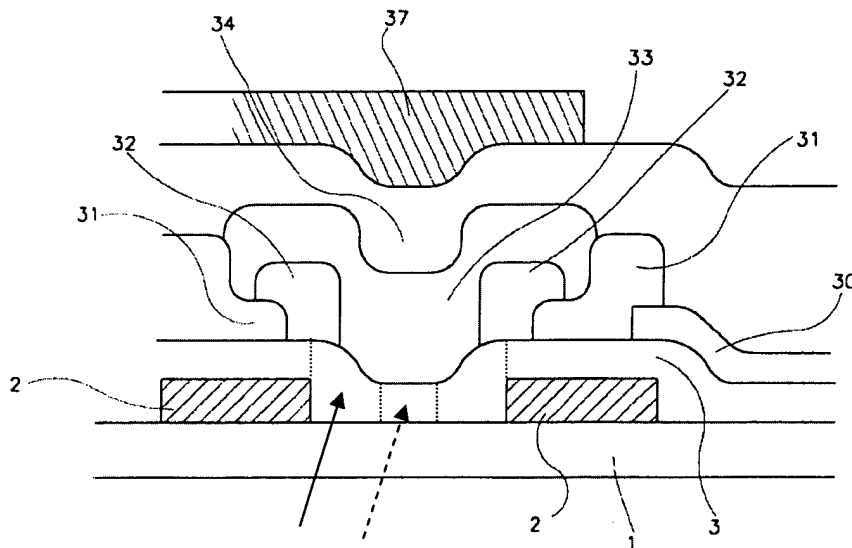
There is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify Suzawa and Chen or to combine reference teachings to achieve the claimed invention. MPEP § 2142 states that the examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. It is respectfully submitted that the Official Action has failed to carry this burden. While the Official Action relies on various teachings of the cited prior art to disclose aspects of the claimed invention and asserts that these aspects could be modified in the manner asserted in the Official Action, it is submitted that the Official Action does not adequately set forth why one of skill in the art would combine the references to achieve the features of the present invention.

The test for obviousness is not whether the references “could have been” combined or modified as asserted in the Official Action, but rather whether the references should have been. As noted in MPEP § 2143.01, “The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.” In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990) (emphasis in original). Thus, it is respectfully submitted that the standard set forth in the Official Action is improper to support a finding of *prima facie* obviousness.

Independent claim 11 recites an island-like semiconductor layer over a region of a first thickness and a region of a second thickness, where the second thickness is smaller than the first thickness. Also, claim 11 recites that the island-like semiconductor layer is capable of being irradiated with light from another surface of a light-transmitting

substrate through the region of the first thickness and the region of the second thickness. However, in Figure 5 of Suzawa, the island-like semiconductor layer 506 (or 510/511 in Figure 5E, reproduced above) is not provided over both a region of a first thickness and a region of a second thickness, where the second thickness is smaller than the first thickness. The Official Action appears to concede this point (page 8, Paper No. 20060205).

Chen does not cure the deficiencies in Suzawa. The Official Action relies on Chen to allegedly teach "a base film 3 having a thin and thick regions; and an island-like semiconductor layer 33 ... over the base film, the layer being formed over the region of the first thickness and second thickness" (Id.; Figure 6 of Chen reproduced and annotated below).



The Official Action asserts that "it would have been obvious to one skilled in the art at the time the invention was made to modify Suzawa's device by covering the thin and thick portions of the base film since that would increase total capacitance of the LCD" (Id.). The Applicant respectfully disagrees and traverses the above assertions in the Official Action.

Figure 6 of Chen could be interpreted as teaching a base film 3 having a region of a first thickness (solid arrow pointing to a region between dotted lines) and a region of

a second thickness (dashed arrow pointing to a region between dotted lines). As noted above, claim 11 recites that the island-like semiconductor layer is capable of being irradiated with light from another surface of a light-transmitting substrate through the region of the first thickness and the region of the second thickness. However, the portions of the base film 3 that overlap black matrix array 2 do not correspond to regions having first and second thicknesses. Portions of the island-like semiconductor region 33 over black matrix array 2 are not capable of being irradiated with light from another surface of a light-transmitting substrate through the region of the first thickness and the region of the second thickness. As such, the island-like semiconductor region 33 would be provided over the region of the second thickness (mid-portion) and the region of the first thickness (peripheral portions). However, in Suzawa, the base film 502 has a first thickness (mid-portion) and a second thickness (peripheral portions), and the semiconductor film is not provided over the portion having the second thickness (peripheral portions). Therefore, the Applicant respectfully submits that one of ordinary skill in the art at the time of the present invention would not have had sufficient motivation to combine Chen and Suzawa such that an island-like semiconductor layer is necessarily provided over a region of a first thickness and a region of a second thickness, where the second thickness is smaller than the first thickness, and where the island-like semiconductor layer is capable of being irradiated with light from another surface of a light-transmitting substrate through the region of the first thickness and the region of the second thickness.

Also, although Chen appears to teach that a "storage capacitor increases the total capacitance for the LCD device" (column 4, lines 54-55; emphasis added), Suzawa does not teach or suggest that total capacitance is related to the structure of first insulating layer 3 or a-Si layer 33. Therefore, there does not appear to be a connection between the asserted motivation of increasing total capacitance and the features missing from Suzawa. The Applicant respectfully submits that the Official Action has not shown sufficient motivation that would have taught or suggested that one of ordinary

skill in the art at the time of the present invention should have made the extensive changes to Suzawa that would be necessary in order to create a device that renders obvious the present claims. Specifically, the Official Action has not shown why one would have been motivated to provide the island-like semiconductor layer 506 (or 510/511) of Suzawa so that it covers both a region of a first thickness and a region of a second thickness or why this change should be done in the specific manner disclosed in Figure 6 of Chen.

Further, it is not sufficient to merely point out the advantages of two references and assert that it would have been obvious to combine the two references so that you can have both advantages in one device. Rather, in order to form a *prima facie* case of obviousness, the Official Action must show why the references should have been combined.

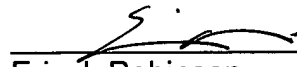
Therefore, the Applicant respectfully submits that the Official Action has not provided a proper or sufficient suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify Suzawa and Chen or to combine reference teachings to achieve the claimed invention.

In the present application, it is respectfully submitted that the prior art of record, either alone or in combination, does not expressly or impliedly suggest the claimed invention and the Official Action has not presented a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.

For the reasons stated above, the Official Action has not formed a proper *prima facie* case of obviousness. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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